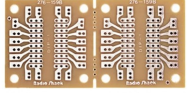




Noisy Cricket Mark II – Building it with a Radio Shack Board

A LM386-based ½ watt guitar amplifier. Use an LM386 or JRC386 chip. Simple tone control and “grit” mod. You can power it at up to 12 volts, but it really sounds best at 9 volts. Plug into a standard 8 ohm guitar cab. This page shows how to build one using a commonly available general purpose IC board from Radio Shack.

The Circuit Board



Radio Shack sells a nice “Dual General-Purpose IC PC Board” which you can use to make all sorts of circuits. Catalog # is 276-159B. Comes as a pair, simple snap it off in the middle and end up with two boards. They are about 2 and a half bucks and sturdy and easy to use.

More info:

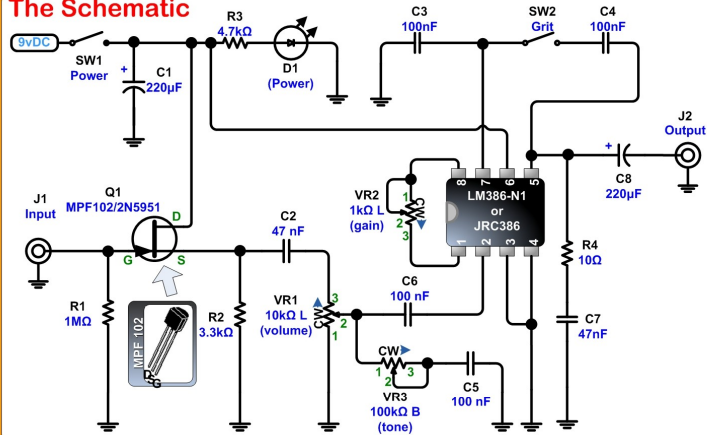
<http://www.radioshack.com/product/index.jsp?productId=2103799&cp>

The Parts

You can get almost all these parts at Radio Shack. All should be available also at mouser.com and smallbearelec.com

Resistors: ¼ or ½ watt R1 1 megaohm R2 3.3k ohms R3 4.7k ohms R4 10 ohms VR1 – 10K Linear (B10K) VR2 – 100K Linear (B100K) VR3 – 1K Linear (B1K)	Electrolytic Capacitors C1, C8 220µf Film Capacitors C2, C7 47nf C3-C6 100nf	Semiconductors U1 LM386 Q1 MPF102 D1 5mm LED	Hardware S1,S2 SPST Switch J1, J2 ¼" Mono Jack 9v Battery Clip 2.1mm DC jack
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The Schematic



Notes and Mods

More Beta Bass: You can replace C2 with a 100nf part for improved bass. Use a 1uf part to make the NC into a bass amp (thanks Brett!)

LM386 and Voltage: The LM386 comes in various versions: N1, N3, N4, etc. The higher the N rating, the more voltage you can pump into it for more output power. If you use the plain LM386 or the LM386 N1, keep to 12 volts or under.

DC Jack: You can add the 2.1mm DC jack to save burning through batteries. Use a plastic jack if you are using a metal enclosure to avoid shorting out!

Grit LED: You can add an LED to show the on/off status of the grit switch—change the grit SPST to a DPDT and wire the new LED's + to the switch to 9v and the new LED's – to ground.

Enclosures

The sky is the limit in terms of wacky ways to box up your Noisy Cricket. You can pick up an inexpensive box at Radio Shack like one of these:



Project Enclosure
(6x4x2")
Cat # 270-1806
\$4.99

You can also use other interesting things like:

- Old lunch box
- Wooden box
- Beer can
- Electrical junction box
- Cigar box
- Pencil case
- Just about anything!

Speakers

The Noisy Cricket sounds best when plugged into a guitar speaker cabinet. 4-16 ohms should be fine but it sounds sweetest at 8 ohms. If you don't have a cab, you can try just about any speaker—smaller ones will be loud enough but probably won't sound as good.



Parts Layout and Wiring Guide

This view is looking at the **NON-SOLDER** site of the board! The solder pads and traces are shown for clarity.

